

pathological condition, which occurs in many districts of the United States, is induced by the presence of fluorine in the drinking water. The water of the artesian well which supplies Chetopa was found to contain over 9 parts per million of fluorine, an amount which invariably leads to damaging and disfiguring lesions of the dental enamel.

For several years Dr. J. Scott Walker, a practicing dentist in that city, called public attention to the dangers of the situation with the result that it was proposed to bond the city to the amount of \$25,000 for a new water supply which would be free from fluorine. Last August this proposal was voted on but defeated, which meant that the dental defects would continue to develop in succeeding generations. Dr. Walker has continued his agitation and has brought it about that the monthly water bills bear the legend: "This water is unfit for consumption by children." It is clear that the matter is by no means settled.

This incident is of interest to public health authorities, not only because the officials of this community decided to save money rather than to eradicate a menace to the health of the community, but even more so because it illustrates what can be done by an energetic and persistent individual in the face of a lack of coöperation. The ingenious method of calling direct attention of the residents to the limitation in potability of the water might be of service to others who are concerned with similar problems.

BERNHARD BANG

FROM Europe comes the notice of the death of Bernhard Bang, one of the leading veterinarians of his time, in his 85th year.

The announcement of the discovery of the tubercle bacillus by Koch came 2 years after his graduation in veterinary medicine. He was one of the early converts to the science of bacteriology and carried out researches on many of the infectious diseases of domestic animals, two of which at least are known to be communicable to man—tuberculosis and bovine abortion. He devoted a great deal of time to the study of the eradication of bovine tuberculosis from cattle, and in 1894 put forth the method known by his name for converting a diseased herd into a healthy one, based on the knowledge that tuberculosis is not an inherited disease. His plan was to separate the newborn calf from the diseased mother within 48 hours of birth, and rear it on milk from a healthy nurse mother, or else on pasteurized milk.

When the diseased cattle had open tuberculosis and were dangerous spreaders of the germ, they were slaughtered. The method required a clean barn free from infection in which the new-born calves were reared, and kept when grown, the diseased cattle being housed in a separate building and gradually sold or killed. The method was successful, but has not been largely adopted in the United States on account of the expense. Bang and Nocard were the first two to inoculate cattle with emulsions of the tubercle bacillus intravenously, the animals being slaughtered within an hour and the tissues examined for the germ of tuberculosis. Their experiments were negative. The object was to determine whether or not the eating of meat from tuberculous animals was dangerous to man.

The second discovery of Bang was that of the germ of contagious abortion, described in 1897. He did not recognize it as being related to the bacillus of Malta fever, isolated by Bruce some 10 years before, but, in 1918, Alice Evans, of the Hygienic Laboratory of the U. S. Public Health Service, now the National Institute of Health, showed the close relationship between the two organisms. Since that time it has been found that the disease is quite widely spread. A number of outbreaks in cattle have occurred, and a considerable number of cases of undulant fever due to the organism have been observed in man.

Bang was born in Zealand, educated there and at Copenhagen. He was appointed Professor of Internal Diseases in the Royal Veterinary College in Copenhagen in 1892, and retained the chair until 1914. We owe much to veterinary science in the development of bacteriology and the study of disease of animals transmissible to man, and to Bernhard Bang, our debt is especially heavy.